

WHAT IS CLAIMED IS:

1. A bulb-shaped fluorescent lamp comprising:

an emission bulb having a bent tube;

a lighting device having a circuit board and electronic parts mounted on said circuit board for outputting high-frequency electric power to said emission bulb; a cover member wherein a cap is provided on the one end side, a holder is provided on the other end for holding said emission bulb, and said lighting device is contained with said circuit board being mounted so that a great part of said electronic parts are disposed on the cap side; and

a fine tube having a configuration wherein said fine tube is extended from the end of a portion of said bent tube toward the cap side within said cover member, and protrudes so that the surface temperature of a portion of said fine tube is kept in the range between 40 and 70°C at the time of normal lighting.

2. A bulb-shaped fluorescent lamp comprising:

an emission bulb having a bent tube;

a lighting device having a circuit board and electronic parts mounted on said circuit board for outputting high-frequency electric power to said emission bulb;

a cover member wherein a cap is provided on the one end side, a holder is provided on the other end for holding said emission bulb, and said lighting device is contained with

said circuit board being mounted so that a great part of said electronic parts are disposed on the cap side; and

a fine tube extending from the end of a portion of said bent tube toward the cap side within said cover member, which protrudes from the end of said bent tube by 25 to 70 mm.

3. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein a principal amalgam is contained within said fine tube, and said principal amalgam is contained at a position close to the cap side as to the position where said electronic parts which, of said electronic parts of said lighting device, emit a relatively great quantity of heat, have been disposed.

4. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said circuit board has an electrolytic capacitor for smoothing as an electronic part, said lighting device converts DC output from said electrolytic capacitor into high-frequency electric power so as to be output to said emission bulb, said electrolytic capacitor is disposed on the cap side of said circuit board, a principal amalgam is contained within said fine tube, and said principal amalgam is contained so as to be positioned closer to the cap side than said electronic parts excluding said electrolytic capacitor.

5. A bulb-shaped fluorescent lamp according to Claim 3, wherein said circuit board is mounted on said cover member so as to be generally orthogonal to the longitudinal direction of said emission bulb, and said principal amalgam is contained within said fine tube so as to be positioned away from the face of said circuit board by 5 to 50 mm.

6. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said cover member includes a globe having an opening on one end thereof, the opening side of said globe is mounted on said cover member so that said globe covers said emission bulb, an amalgam is contained within said fine tube, and said fine tube protrudes from the end of said emission bulb by 25 to 60 mm in a case of lamp input electric power in the range between 7 and 25 W.

7. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said fine tube is extended from a portion of said bent tube toward the cap side as to electronic parts which, of said electronic parts of said lighting device, emit a relatively great quantity of heat, and a discharge medium which contains mercury and causes generally the same vapor pressure as with pure mercury is sealed within the fine tube.

8. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said cover member includes a globe

having an opening on one end thereof, the opening side of said globe is mounted on said cover member so that said globe covers said emission bulb, and said fine tube protrudes so that the surface temperature of a portion of said fine tube is kept in a range between 40 and 60°C when the lamp normally turns on.

9. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said cover member includes a globe having an opening on one end thereof, the opening side of said globe is mounted on said cover member so that said globe covers said emission bulb, and said fine tube protrudes from the end of said emission bulb by 25 to 70 mm in a case of the lamp input electric power in a range between 7 and 25 W.

10. A bulb-shaped fluorescent lamp according to Claim 1 or 2, wherein said circuit board has an inserting portion through which said fine tube can pass, and said circuit board is mounted on said cover member so as to be generally orthogonal to the longitudinal direction of the bent tube making up said emission bulb.

11. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein a principal amalgam is sealed within said emission bulb, the content of mercury (Hg) as to the entire alloy of the principal amalgam is 3% by mass or more,

and metal forming said alloy comprises at least a metal selected from a group of bismuth (Bi), lead (Pb), zinc (Zn), and tin (Sn).

12. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein an auxiliary amalgam is sealed within said emission bulb, and metal base forming said auxiliary amalgam comprises at least a metal selected from a group of gold (Au), silver (Ag), palladium (Pd), platinum (Pt), lead (Pb), zinc (Zn), bismuth (Bi), and tin (Sn), as a principal component.

13. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said emission bulb is covered with a globe mounted on said cover member, and the maximal diameter of said globe is equal to or less than 65 mm.

14. A bulb-shaped fluorescent lamp according to either Claim 1 or 2, wherein said circuit board has a fine tube inserting portion for inserting said fine tube, said fine tube is formed with a diameter less than the outer diameter of the bent tube of said emission bulb, said fine tube protrudes from the end of said emission bulb and has a bent portion on the middle portion thereof, the tip end portion of said fine tube from said bent portion is disposed close to the axis passing through the center of said cap as compared with the base portion of said fine tube from said

bent portion on the side of said emission bulb, and an amalgam is contained within said fine tube.

15. A bulb-shaped fluorescent lamp according to Claim 14, wherein the bent portion of said fine tube is disposed at a position closer to the emission bulb side than said circuit board, and the tip end portion of said fine tube is inserted into said fine tube inserting portion so as to extend on the side of said cap.

16. A bulb-shaped fluorescent lamp according to Claim 14, wherein said cap is provided to one end of said cover member, and said holder for holding said emission bulb, which has an emission bulb inserting portion through which the end of said emission bulb can pass, and has a notched portion formed on said emission bulb inserting portion, is provided to the other end of said cover member, said circuit board is mounted and said cover member contains said lighting device so that a great part of said electric parts are disposed on the side of said cap, the tip end portion of said fine tube extends on the side of the cap as to electronic parts which, of said electronic parts, emit a relatively great quantity of heat, and said bent portion passes through said notched portion when inserting the end portion of said emission bulb into said emission bulb inserting portion.

17. A bulb-shaped fluorescent lamp according to Claim 14, wherein said cap is provided to one end of said cover member, and said holder for holding said emission bulb, which has an emission bulb inserting portion through which the end of said emission bulb can pass, is provided to the other end of said cover member, said circuit board is mounted and said cover member contains said lighting device so that a great part of said electric parts are disposed on the side of said cap, the tip end portion of said fine tube extends on the side of the cap as to electronic parts which, of said electronic parts, emit a relatively great quantity of heat, and said bent portion is bent so that said holder does not interfere with inserting of said bent portion when inserting the end portion of said emission bulb into said emission bulb inserting portion.

18. A bulb-shaped fluorescent lamp according to Claim 17, wherein said bent portion is formed so that a line passing through the center of the end portion of said emission bulb and the center of said cap, and a line passing through the center of end portion of said emission bulb and the center of the tip end portion of said fine tube, intersect at an angle in the range between -45° and $+45^{\circ}$.

19. A bulb-shaped fluorescent lamp according to Claim 14, wherein an electrolytic capacitor is mounted on said circuit board as an electronic part having a pair of leads

erected on said circuit board, wherein a line passing through connectors on said circuit board for said leads making a pair, and a line passing through the base end portion and the tip end portion of the bent portion of said fine tube, are orthogonal one to another.

20. A bulb-shaped fluorescent lamp according to Claim 14, wherein an electrolytic capacitor is mounted on said circuit board as an electronic part having a pair of leads erected on said circuit board, wherein a line passing through connectors on said circuit board for said leads making a pair, and a line passing through the base end portion and the tip end portion of the bent portion of said fine tube, are parallel one to another.

21. An illumination device comprising:

a bulb-shaped fluorescent lamp according to any of the Claims 1 through 20; and

a device main unit for detachably mounting said bulb-shaped fluorescent lamp.